



North Carolina Department of Environment and Natural Resources

Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

Solid Waste Section

May 24, 2012

Mr. David Lambert, Solid Waste Director
Iredell County MSW Landfill
354 Twin Oaks Road
Statesville, NC 28625-6447

Re: Technical Review and Approval Letter for Phase 5
Design Hydrogeologic Study, Water Quality Monitoring Plan, and
Landfill Gas Monitoring Plan
Iredell County MSW Landfill Facility, Iredell County, North Carolina
Document ID No. (Doc ID) 16683

Dear Mr. Lambert:

The North Carolina Solid Waste Section has completed a technical review of the May 2012 revisions to the November 2011 Design Hydrogeologic Study associated with the Permit to Construct for Phase 5 expansion of the Iredell County MSWLF. The Study also includes the Water Quality Monitoring Plan and Landfill Gas Monitoring Plan.

Groundwater and surface water monitoring at Phase 5 of the Iredell County MSW Landfill will be conducted in accordance with the Revised May 2012 Water Quality Monitoring Plan located in Appendix E of the aforementioned Design Hydrogeologic Study. Landfill gas monitoring will be conducted in accordance with the November 2011 Landfill Gas Monitoring Plan, also included in Appendix E of the Study.

The groundwater monitoring well network for Phase 5 will include one upgradient background monitoring well, MW-30 (P5-31), nested well pair MW-36S/MW-36D (P-84S/P-84D), MW-35 (P5-16), MW-34 (P5-14), nested well pair MW-33S/MW-33D (P5-21S/P5-21D), MW-31 (P-79), and MW-32 (P-81). Existing groundwater monitoring wells, MW-1A, MW-1B, MW-1C, and MW-25 associated with the adjacent C&D landfill will also be sampled for Phase 5 monitoring. Within six (6) months of issuing the Phase 5 to Permit to Operate, four independent sampling events of monitoring wells from MW-30 (P5-31), nested well pair MW-36S/MW-36D (P-84S/P-84D), MW-35 (P5-16), MW-35 (P5-14), nested well pair MW-33S/MW-33D (P5-21S/P5-21D), MW-31 (P-79), and MW-32 (P-81) will be collected with at least one sampling event occurring prior to receiving waste. These sampling results will be used to establish a baseline for water quality information for the subsequent Phase 5 sampling events. Groundwater and surface

water monitoring points will be sampled semi-annually thereafter for the Appendix I list of constituents.

Surface water sampling point SW-6 is located 370 feet southeast of the Phase 5 landfill boundary on a tributary to Fourth Creek. This sample location is also currently being monitored as part of the closed C&D landfill.

Leachate sampling will be sampled according to the Water Quality Monitoring Plan.

The Landfill Gas Monitoring Plan mentions ten (10) additional gas monitoring wells, designated as MP5-1, MP5-2, MP5-3, MP5-4, MP5-5, MP5-6, MP5-7, MP5-8, MP5-9, and MP5-10 will be added to the landfill gas monitoring program. The wells shall be installed at locations depicted according to Drawing Plate-A titled, "Landfill Gas Probe Locations" in Appendix E. The gas monitoring wells shall also be constructed and sampled according to the Landfill Gas Monitoring Plan. In the event that elevated levels of landfill gas are detected in any of the landfill gas monitoring probes, the NC Solid Waste Section will require installation of additional landfill gas probes.

The Design Hydrogeologic Report, Water Quality Monitoring Plan, and Landfill Gas Monitoring Plan meet the criteria required in 15A NCAC 13B .1623(b), .1624(b)(4), and .1626(4) and therefore, this portion of the Permit to Construct application is approved.

Piezometers, groundwater monitoring wells, and borings located in the proposed phase for construction may be abandoned now or after a Permit to Construct is issued by the Solid Waste Section. Prior to construction of the new phase, all piezometers, groundwater monitoring wells, and borings located within the footprint must be properly abandoned in accordance with 15A NCAC 2C.0113(d) entitled "Abandonment of Wells".

Well abandonment records (form GW-30) for each decommissioned piezometer, boring, and groundwater monitoring well must be certified by a Licensed Geologist in accordance with rule .1623(b)(2)(I) and submitted to the Solid Waste Section in accordance with 15A NCAC 02C.0114(b). After the piezometers and/or groundwater wells are abandoned and new landfill gas wells are constructed, please submit an updated monitoring well location drawing.

A hard copy and an electronic copy of the groundwater and surface water monitoring data collected at the landfill facility must be provided to the Solid Waste Section. Guidelines for groundwater, surface water, and landfill gas monitoring and submitting the results electronically can be located at the Solid Waste Section's web site:

<http://portal.ncdenr.org/web/wm/sw/environmentalmonitoring>.

Additional Geologic, Groundwater and Monitoring Requirements will be included in the Permit to Construct. If you have any questions, you may contact me at (919) 707-8258.

Sincerely,

A handwritten signature in black ink that reads "Brian Wootton". The signature is written in a cursive, flowing style.

Brian Wootton
Hydrogeologist
Solid Waste Section

Cc: D. Mark Durway, Municipal Engineering, Inc.
Wayne Sullivan, Municipal Engineering, Inc.
Ed Mussler, NC Solid Waste Section
John Murray, NC Solid Waste Section
Jackie Drummond, NC Solid Waste Section
Teresa Bradford, NC Solid Waste Section